

Maresh describes the cDNA for a tumor antigen called ME20. This cDNA encodes a gp100 protein. However, Maresh does not teach or suggest any short peptides of gp100 capable of reacting with T-lymphocytes, as claimed in the present invention. Without some teaching or suggestion of which amino acids are immunogenic, it would be undue experimentation to identify peptides capable of reacting with T-lymphocytes from the full-length protein. Therefore, applicants submit that Maresh does not teach or suggest the invention as set forth in claims 15-16 and 27-28. Reconsideration and withdrawal is respectfully requested.

Claims 15-16 and 27-28 have been rejected under 35 U.S.C. §102(b) as being anticipated by WO 92/21767. Applicants respectfully disagree with this rejection.

WO 92/21767 describes an antibody capable of recognizing a fragment of gp100. The fragment used in preparing this antibody is a 29 amino acid fragment of gp100. WO 92/21767 fails to teach or suggest immunogenic gp100 peptides as claimed. Hence this reference does not anticipate the present invention. Applicants submit that undue experimentation is required to identify short peptides as claimed from that disclosed in WO 92/21767. No guidance or suggestion is provided on how shorter peptides can be identified that will have the properties required by the instant claims. No guidance or suggestion is provided that any of the peptides of gp100 will stimulate T-lymphocyte production or be useful in treatment of melanoma. Applicants respectfully request reconsideration and withdrawal of this §102(a) rejection.

Claims 15-21 and 27 have been rejected under 35 U.S.C. §112, second paragraph as failing to point out the invention. In particular, claim 15 is rejected for the recitation of "within" and "recognized by". Also, the Examiner asserts that SEQ ID NO is necessary in claim 15 because gp100 is known by several different names. Claim 27 is rejected as being dependent on non-elected claims. Applicants respectfully traverse this rejection.

Claim 15 has been criticized for lacking a functional limitation because "recognizes" confers no specific function. Applicants respectfully disagree with this rejection. The term "recognizes" is well-understood in the field of immunology and immunochemistry in describing the interactions between antigens, antigen-presenting molecules and antibodies. However, in order to expedite prosecution of the claims, applicants have amended the claims to recite "reactive with". This recitation is understood to reflect the interaction occurring once the peptide has bound to MHC and is then recognized by and bound to TIL. Applicants respectfully request reconsideration and withdrawal of the rejection.

As to the rejection of claim 15 for the recitation of "within", applicants respectfully disagree that this language is unclear. However, in order to facilitate prosecution of the claims applicants have amended the claims to address the Examiner's concerns. In addition, the SEQ ID NO of gp100 has been added parenthetically. Reconsideration and withdrawal of the §112 rejection of claim 15 is respectfully requested.

Claim 27 has been objected to as being dependent on non-elected claims.

Applicants have amended the claim to address the Examiner's concerns. Reconsideration and withdrawal is respectfully requested.

Claims 22-24, 26-29 and 31 have been rejected under 35 U.S.C. §102(a) as being anticipated by Cox et al. (*Science* 264:717 (1994)). Applicants respectfully disagree with this rejection.

Cox et al. was published in *Science* on April 29, 1994. The present application claims priority based upon a parent application (Ser. No. 08/231,565), filed on April 22, 1994. Hence, the parent application was filed before the publication date of Cox. The parent application discloses the peptide described in Cox and supports claims 22-24, 26-29 and 31. (*See* 08/231,565, pp. 37-38; i.e. peptide G10-288). Therefore, the present invention was complete prior to the publication date of the Cox article. As such, Cox does not qualify as prior art. Applicants respectfully request reconsideration and withdrawal of this rejection.

Claims 22-24, 26-31 have been rejected under §103(a) as being unpatentable over Cox et al. (*Science* 264:717 (1994)). Applicants disagree with this rejection.

For the reasons set forth above, Cox is not prior art to the instant application and hence cannot render the present invention unpatentable under §103(a). Reconsideration and withdrawal is respectfully requested.

AUTHORIZATION

No additional fee is believed to be necessary.

The Commissioner is hereby authorized to charge any additional fees which may be required for this response, or credit any overpayment to Deposit Account No. 13-4500, Order No. 2026-4124US1.

In the event that an extension of time is required, or which may be required in addition to that requested in a petition for an extension of time, the Commissioner is requested to grant a petition for that extension of time which is required to make this response timely and is hereby authorized to charge any fee for such an extension of time or credit any overpayment for an extension of time to Deposit Account No. 13-4500, Order No. 2026-4124US1. A DUPLICATE OF THIS SHEET IS ATTACHED.

Respectfully submitted,

MORGAN & FINNEGAN, L.L.P.

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By: Dorothy R. Auth
Dorothy R. Auth
Reg. No. 36,434

Mailing Address:

MORGAN & FINNEGAN, L.L.P.
345 Park Avenue
New York, New York 10154
(212) 758-4800
(212) 751-6849 Telecopier